

THE INVENTION CLAIMED IS:

1. An X-ray analyzer for making an analysis of a sample by directing primary X-rays from a target in an X-ray tube at the sample to excite secondary X-rays from the sample and detecting the excited secondary X-rays, said X-ray analyzer comprising:

a first X-ray filter for filtering out primary X-rays from the target in the X-ray tube;

a second X-ray filter for filtering out X-rays emerging from the first X-ray filter;
and

a third X-ray filter for filtering out X-rays emerging from the second X-ray filter;

wherein said first through third X-ray filters are located between the target in the X-ray tube and the sample.

2. The X-ray analyzer of claim 1, wherein said third X-ray filter absorbs X-rays which are excited by said primary X-rays and produced from one of said first and second X-ray filters.

3. The X-ray analyzer of claim 1, wherein said second X-ray filter absorbs X-rays which are excited by said primary X-rays and produced from said first X-ray filter.

4. An X-ray analyzer for analyzing cadmium or lead contained in a sample by directing primary X-rays from a target in an X-ray tube at the sample to excite secondary X-rays from the sample and detecting the secondary X-rays, said X-ray analyzer comprising:

an X-ray filter for absorbing energies lower than said primary X-rays (XH) having energies higher than $K\alpha$ -line of said cadmium to irradiate the sample only with the high-energy primary X-rays (XH), the X-ray filter being located between the target in the X-ray tube and the sample.

5. An X-ray analyzer of claim 1 or 2,
wherein the target in the X-ray tube consists of rhodium,
wherein said first X-ray filter consists of zirconium,
wherein said second X-ray filter consists of one of copper, zinc, and nickel,
and

wherein said third X-ray filter consists of molybdenum.

6. An X-ray analyzer of claim 1 or 2,
wherein the target in the X-ray tube consists of rhodium,
wherein said first X-ray filter consists of one of copper, zinc, and nickel,
wherein said second X-ray filter consists of zirconium, and
wherein said third X-ray filter consists of molybdenum.

7. An X-ray analyzer of claim 1 or 3,
wherein the target in the X-ray tube consists of rhodium,
wherein said first X-ray filter consists of one of copper, zinc, and nickel,
wherein said second X-ray filter consists of molybdenum, and
wherein said third X-ray filter consists of zirconium.

8. An X-ray analyzer of claim 1 or 2,
wherein the target in the X-ray tube consists of molybdenum,
wherein said first X-ray filter consists of molybdenum,
wherein said second X-ray filter consists of one of copper, zinc, and nickel,

and

wherein said third X-ray filter consists of molybdenum.